

IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

On page 2, please replace paragraph [1005] with the following paragraph:

To reduce the possibility of overflowing or overrunning the buffer at the BTS, i.e., the BTS receiving more data from the BSC than the buffer can accommodate and/or transmit to the user, as well as the possibility of “starving” the buffer, i.e., the BTS not receiving data from the BSC when the buffer is empty, mechanisms to control the data flow between the BSC and the BTS are commonly employed. Generally, flow control mechanisms are based on the BTS advertising to the BSC the amount of space, or “window[“,”],” available at the buffer for receiving more data in order for the BSC to determine how much data to transmit to the BTS.

On page 7, please replace paragraph [1019] with the following paragraph:

FIG. 1 illustrates an exemplary wireless communication system in accordance with one embodiment. Exemplary wireless communication system 100 shown in FIG. 1 can comprise, for example, part of a code division multiple access (“CDMA”) communication system configured to be interoperable with High Data Rate (“HDR”) technology. The general principles of CDMA communication systems, and in particular the general principles for generation of spread spectrum signals for transmission over a communication channel is described in U.S. ~~patent~~ Patent No. 4,901,307 entitled “Spread Spectrum Multiple Access Communication System Using Satellite or Terrestrial Repeaters” and assigned to the assignee of the present invention. The disclosure in that patent, i.e., U.S. ~~patent~~ Patent No. 4,901,307, is hereby fully incorporated by reference into the present application. Moreover, U.S. ~~patent~~ Patent No. 5,103,459 entitled “System and Method for Generating Signal Waveforms in a CDMA Cellular Telephone System” and assigned to the assignee of the present invention, discloses principles related to PN spreading, Walsh covering, and techniques to generate CDMA spread spectrum communication signals. The disclosure in that patent, i.e., U.S. ~~patent~~ Patent No. 5,103,459, is also hereby fully incorporated by reference into the present application. Further, the present invention utilizes time multiplexing of data and various principles related to “high data rate” communication

systems, and the present invention can be used in “high data rate” communication systems, such as that disclosed in U.S. ~~patent application~~ Patent Application entitled “Method and Apparatus for High Rate Packet Data Transmission,” Serial No. 08/963,386, filed on November 3, 1997, now U.S. Patent No. 6,574,211, issued on June 30, 2003, and assigned to the assignee of the present invention. The disclosure in that patent application is also hereby fully incorporated by reference into the present application.

On page 8, please replace paragraph [1020] with the following paragraph:

Continuing with FIG. 1, exemplary wireless communication system 100 comprises components generally found in wireless communication systems, including a wireless receiving unit such as mobile unit 110, base transceiver station (“BTS”) 116, base station controller (“BSC”) 122, “Internet” 124, and data server 126. Mobile unit 110 and BTS 116 further comprise, respectively, antenna 112 and antenna 114. In wireless communication system 100, BTS 116 serves as a radio link between mobile unit 110 and the rest of the system. It is noted that wireless communication systems may comprise other components such as a mobile switching center and a public switched telephone network which are not shown in any of the ~~[[FIG.s]]~~ FIGs. in order to not obscure the invention.

On page 10, please replace paragraph [1026] with the following paragraph:

Continuing with FIG. 2, buffer 200 has a fixed size or data capacity (i.e., buffer size 206), which can be, for example, approximately 50 Kbytes for a typical transmit buffer. Further, buffer 200 comprises data 208 with data size 210, which represents the amount of data queued at buffer 200 for transmission to wireless mobile units, and window 212 with window size 214, which represents the unused space available for receiving more data at buffer 200. The relative sizes of data 208 and window 212 are a function of the rate of data flow through buffer 200.

On page 22, please replace paragraph [1028] with the following paragraph:

Referring again to FIG. 2, data packet 216 constitutes one of a plurality of similarly packetized data packets of data 208 queued in buffer 200. Data packet 216 is enlarged in FIG. 2 to facilitate further discussion. As with other similarly packetized data packets in buffer 200,

data packet 216 comprises data, i.e., data 218 and a packet ID, i.e., packet ID 220. Packet ID 220 is an identification tag “stamped” on data 218 by the base station controller and is unique to data packet 216. Packet ID 220 can be used, for example, to track the movement of data packet 216 as it moves through the communication system in a manner known in the art.

On page 12, please replace paragraph [1029] with the following paragraph:

In one embodiment, the unique packet ID of the last data packet received by the buffer, i.e., the data packet received most recently, is included in the flow indication message transmitted to the base station controller. The packet ID of the data packet received most recently is also referred to as a “last packet ID” in the present application. As discussed above, the flow indication message is transmitted after a threshold number of data packets have been transmitted from the buffer. In the present embodiment, the flow indication message can also comprise the buffer window size in addition to the last packet ID.

On page 15, please replace paragraph [1036] with the following paragraph:

The flow indication message is then transmitted to the base station controller which utilizes the information, i.e., the buffer window size and the packet ID, to determine how much data it can transmit to the buffer and which data packet should be transmitted next. Transmission of the flow indication message can be performed, for example, by a transmit module at the base station. It is noted that the base station transmit module is not shown in any of the [[FIG.s]] FIGs. Further, message generating module 310 notifies flow indication counter module 302 each time a flow indication message is transmitted so that flow indication counter module 302 can reset the updated number of data packets transmitted from the buffer to zero. By tying the flow control mechanism directly to the rate of data flowing out of the buffer, the present embodiment provides a more reliable method for flow control than conventional flow control methods. Further, the possibility of overrunning the buffer is reduced because the base station controller receives information on the rate of data leaving the buffer and can adjust the amount of data it sends to the buffer accordingly.

On page 15, please replace paragraph [1037] with the following paragraph:

In another instance, message generating module 310 is triggered to generate and transmit a flow indication message after a threshold time interval has elapsed since the transmission of a last flow indication message, even if the threshold number of data packets transmitted from the buffer has not been reached, i.e., even if flow indication counter module 302 does not trigger message generating module 310. Timer 308 in flow control module 300 keeps track of the elapsed time between flow indication messages sent from message generating module 310. If a threshold time interval elapses without a flow indication message being sent, timer 308 triggers message generating module 310 to generate and transmit a flow indication message. As an example, the threshold time interval can be 0.5 seconds. The flow indication message can comprise information that message generating module 310 receives from data packet ID monitoring module 304, i.e., the last packet ID, and window size monitoring module 306, i.e., the buffer window size. Thus, timer 308 triggers message generating module 310 to send a flow indication message independently of the number of data packets transmitted from the buffer.

On page 18, please replace paragraph [1043] with the following paragraph:

If instead the timer determines at step 404 that less than time T has elapsed since the last message was sent, then the flow control process proceeds to step 406. At step 406, it is determined whether or not a new or “next” data packet has been transmitted from the buffer. This determination can be performed by software in a flow indication counter module such as flow indication counter module 302. When a next data packet has not been transmitted, then the process returns to step 404 to determine again whether time T has elapsed since the last flow indication message was sent. In this manner, i.e., looping back to step 404 when a next data packet has not been transmitted from the buffer, a safeguard mechanism is available to make certain that flow indication messages will be sent at least every time T.

On page 20, please replace paragraph [1046] with the following paragraph:

If it is determined at step 410 that the updated number of data packets transmitted from the buffer is equal to or greater than the threshold number, then the process proceeds to step 412. At step 412, a flow indication message is generated and sent to the base station controller. The

flow indication message can comprise the buffer window size and the packet ID of the last data packet received by the buffer, i.e., last packet ID. The flow indication message can be generated and sent by message generating module 310 which receives the buffer window size from window size monitoring module 306 and the last packet ID from packet ID monitoring module 304. The steps of generating and transmitting the flow indication message to the base station controller are also referred to as “advertising” in the present application. Thus, the flow indication message advertises the information to the base station controller which uses the information to determine how much data to transmit to the buffer, as well as the proper sequence of data packets to transmit next.

On page 20, please replace paragraph [1047] with the following paragraph:

Continuing with flowchart 400, the process then proceeds to step 414 where the updated number of data packets transmitted and time T are reset to zero. The process then returns to step 404 in order to continue controlling the flow of data from the base station controller to the base transceiver station. It is noted that the process does not terminate, or “end[“,”],” until the connection between the base station controller and the base transceiver station is severed. Thus, FIG. 4 shows an example process for flow control between a base station controller and a base transceiver station in accordance with one embodiment.